



PVC Pool Hose Reel

Written By: Johnny



TOOLS:

- [5/8" drill bit \(1\)](#)
- [9/64" drill bit \(1\)](#)
- [Drill \(1\)](#)
- [Measuring device \(1\)](#)
- [PVC cement \(1\)](#)
- [Pen or pencil \(1\)](#)
- [Rubber hammer \(1\)](#)
- [Sand paper \(1\)](#)
- [Saw or PVC cutter \(1\)](#)
- [Wood chisel or knife \(1\)](#)
- [screw driver \(1\)](#)
- [1/4" drill bit \(1\)](#)



PARTS:

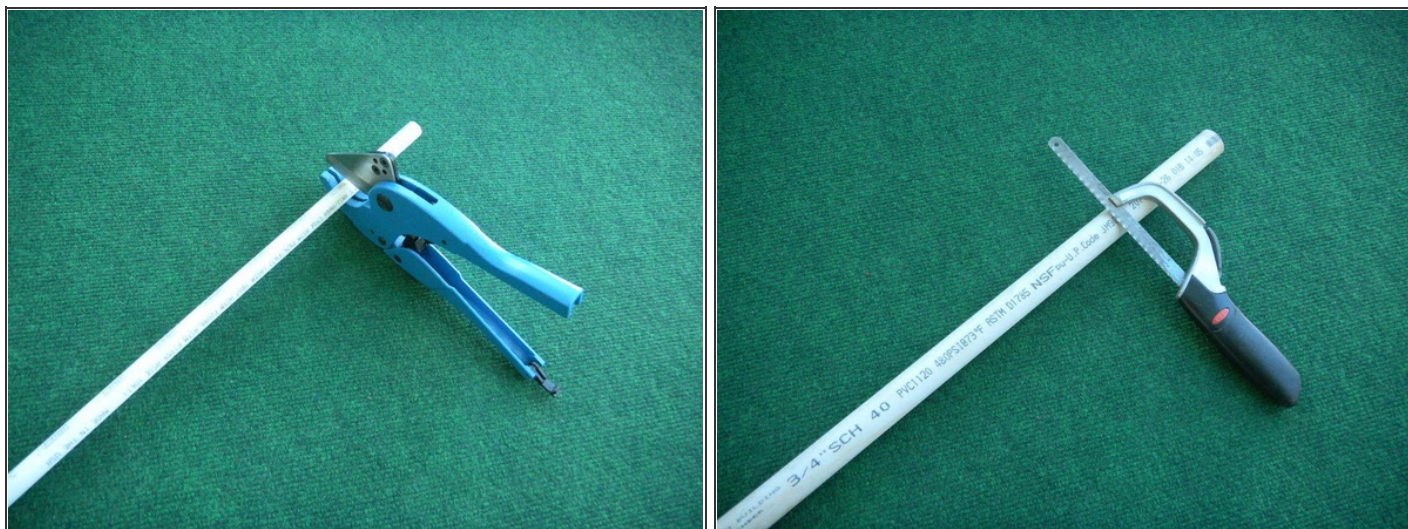
- [Class 200 pressure grade 3/4" PVC pipe: 15' \(1\)](#)
- [Sch40 grade 3/4" PVC pipe: 3' \(1\)](#)
- [Sch40 grade 1/2" PVC pipe: 2'6" \(1\)](#)
- [Pex 1/2" pipe: 9" \(1\)](#)
- [Micro tubing \(drip system used pipe\) 1/4" pipe: 1" \(1\)](#)
- [PVC fitting 3/4" tee: 22 \(1\)](#)
- [PVC fitting 3/4" elbow: 7 \(1\)](#)
- [PVC fitting 3/4" coupling: 2 \(1\)](#)
- [PVC fitting 3/4" cross: 3 \(1\)](#)
- [PVC fitting 3/4" cap: 3 \(1\)](#)
- [PVC fitting 3/4"x 1/2" tee: 3 \(1\)](#)
- [PVC fitting 3/4"x 1/2" bushing: 4 \(1\)](#)
- [PVC fitting 1" coupling: 1 \(1\)](#)
- [1 1/2" screw: 2 \(1\)](#)
- [Snap Clip Spring \(pool pole used clip\): 1 \(1\)](#)

SUMMARY

This PVC pool hose reel only cost around \$25. You can find all of the materials in local hardware stores and make it using simple tools. Some benefits of this design:

1. The hose is wound vertically on the reel so that the water in the hose can drain out.
2. To release any twisting and kinking of the hose, an arm gets the hose untangled in advance of winding on the reel.
3. The vertical reel can be removed from the base frame to unwind the hose by gravity (it's fast).
4. It can also carry and store a hose, brush, vacuum head and leaf rake.

Step 1 — Cut pipes



- Cut pipes with saw or PVC cutter to the following sizes:
- **Class200pe grade 3/4" pipe:** 18"x1, 10 1/2"x2, 6 1/2"x7, 6"x6, 5 1/4"x1, 4 1/4"x1, 4"x1, 3"x1, 3 3/4"x1, 2 1/2"x6, 2"x8, 1 3/4"x1, 1 1/2"x2
- **Sch40 grade 3/4" pipe:** 6 1/2"x5, 3"x1.
- **Sch40 grade 1/2" pipe:** 21 1/4"x1, 6"x1, 2 1/2"x1.
- **Pex 1/2" pipe:** 4 1/2"x2.
- **Micro tubing 1/4" pipe:** 1/2"x2.

Step 2 — Cut a coupling



- Cut a 3/4" coupling into two halves. Remove the lip of the coupling on both halves.

Step 3 — Cut 2 bushings



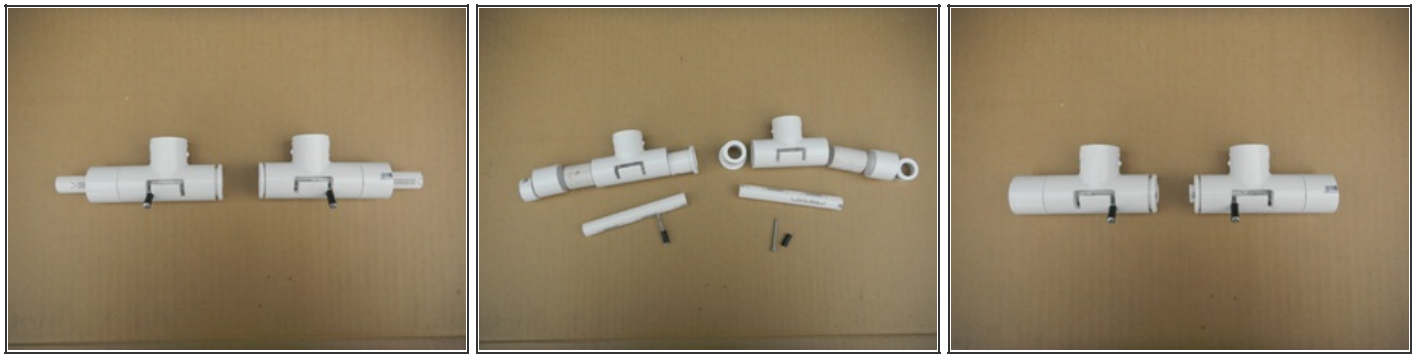
- Cut two bushings $\frac{1}{2}$ " from bottoms (small ends). Throw away tops. Keep two $\frac{3}{4}$ "x $\frac{1}{2}$ " bushing bottoms which are $\frac{1}{2}$ " in length.

Step 4 — Make inverted U slots on 2 tees



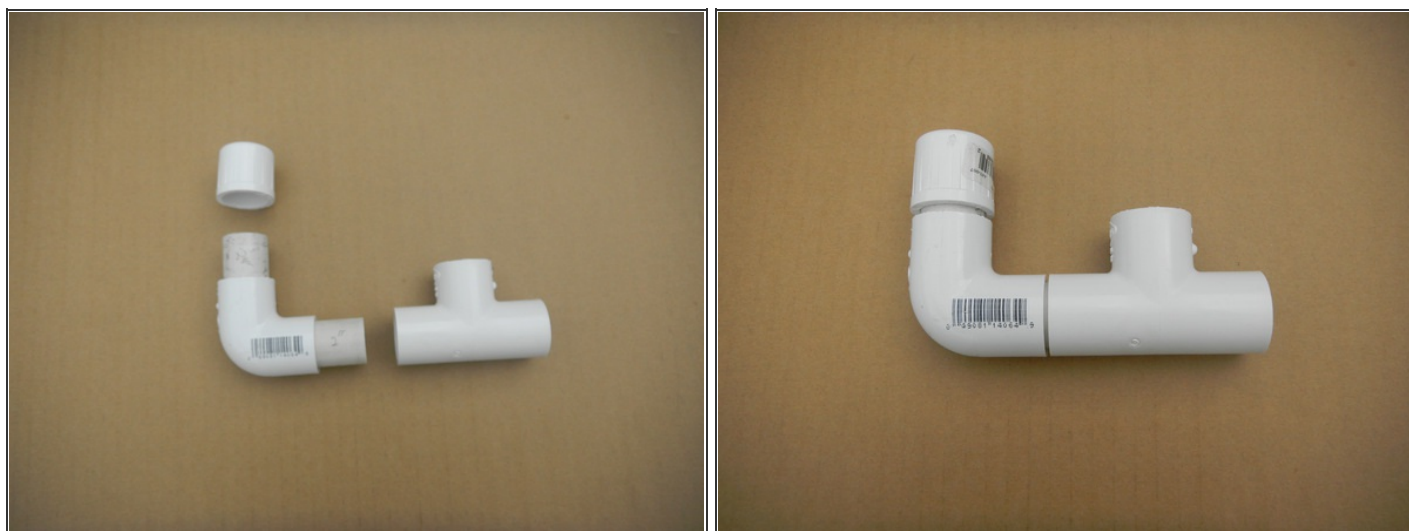
- Mark an inverted U line on middle of a tee. The vertical portions of the line should be $\frac{1}{2}$ " long and the horizontal portion should be 1" long.
- Drill holes with a $\frac{9}{64}$ " drill bit on the ends and corners of the line. Cut the inverted U slot with a chisel or knife. The slot's width should allow the thickness of a $1\frac{1}{2}$ " screw to move smoothly in it. We need two $\frac{3}{4}$ " tees with inverted U slots.

Step 5 — Make two bolts



- Now we will assemble two bolts. One will be the left-side bolt and the other one will be the right-side bolt.
- Start with the left-side bolt. Assemble a $\frac{3}{4}$ " x $\frac{1}{2}$ " bushing bottom, a half $\frac{3}{4}$ " coupling piece, a $1\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe, a $\frac{3}{4}$ " tee with inverted U slot and a whole $\frac{3}{4}$ "x $\frac{1}{2}$ " bushing.
- Then put a $4\frac{1}{2}$ " length of Pex $\frac{1}{2}$ " pipe through the holes of both bushings and align the ends flush with the bushings. Put a $1\frac{1}{2}$ " screw through a $\frac{1}{2}$ " length of Micro tubing $\frac{1}{4}$ " pipe and drive it into the Pex $\frac{1}{2}$ " pipe through the right end of the inverted U slot in the tee.
- Assemble the right-side bolt in the same way but as a mirror image of the left-side bolt.
- Glue all of the PVC fittings together, making sure that the Pex pipe can slide freely inside the assemblies.

Step 6 — Make a hook



- Assemble a $\frac{3}{4}$ " tee, a 2" length of Class 200 PVC grade $\frac{3}{4}$ " PVC pipe, a $\frac{3}{4}$ " elbow, a 2" length of Class 200 PVC grade $\frac{3}{4}$ " PVC pipe and a $\frac{3}{4}$ " cap. Glue all of these together.

Step 7 — Make handle and bearing



- Assemble a $\frac{3}{4}$ " cap, a $2\frac{1}{2}$ " length of Class 200 PVC grade $\frac{3}{4}$ " PVC pipe*, a $\frac{3}{4}$ " tee and the second $2\frac{1}{2}$ " length of Class 200 PVC grade $\frac{3}{4}$ " PVC pipe. Put a 6" length of Sch 40 grade $\frac{1}{2}$ " PVC pipe** inside the assembly, and close with the second $\frac{3}{4}$ " cap.
- Glue all of the $\frac{3}{4}$ " PVC.
- *The two $\frac{3}{4}$ " pipes have to be Class 200 PVC grade which has a bigger inner diameter so that the $\frac{1}{2}$ " pipe can fit inside.
- **Don't glue the 6" length Sch 40 grade $\frac{1}{2}$ " PVC pipe. It works as a bearing here.



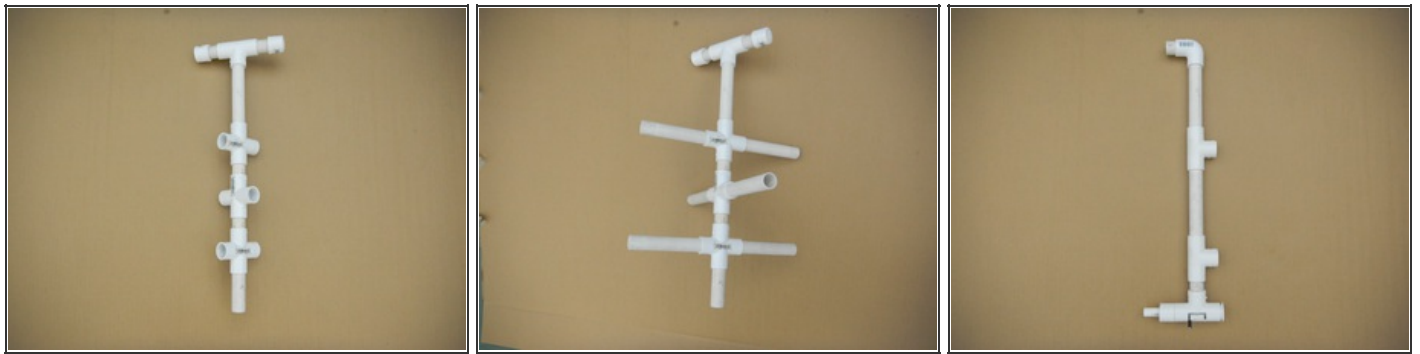
Step 8 — Make a clip lock



- Assemble a 1½" length Class200pe grade ¾" PVC pipe* with a ¾" elbow. Glue the elbow and pipe. Mark a hole center on a ¾"tee 3/8" from its edge. Assemble the tee on the pipe, close and align tee and elbow. Drill a ¼" hole at the mark. Drill another hole on the other side in the same way.
- Separate the tee from the pipe. Put the snap clip into the pipe and snap it into the holes.
- Now we have a clip lock consisting of an elbow and a tee. They will be separately assembled to two parts - the reel body and the arm - and the clip lock is used to lock the two parts together.
- Chamfer the holes on the tee so that it is easy to release the clip lock by pushing the studs in with your fingers.
- *The pipe has to be Class200pe grade ¾" PVC pipe which has a bigger inner diameter so that the snap clip can fit in it.



Step 9 — Make reel body



- Assemble axle: a 3 $\frac{3}{4}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe*, a $\frac{3}{4}$ " cross, a 2 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe, the second $\frac{3}{4}$ " cross turned 90°, the second 2 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe, the third $\frac{3}{4}$ " cross, a 6 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe and the handle which we made in Step 7. Turn the handle 45° to the crosses.
- Assemble spokes with 6 pieces of 6" long Class200pe grade $\frac{3}{4}$ " PVC pipe in the $\frac{3}{4}$ " crosses.
- Assemble the first hub pole: the left-side bolt which we made in Step 5, a 2 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe, a $\frac{3}{4}$ " tee, a 6 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe, the second $\frac{3}{4}$ " tee, the second 6 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe and the clip lock elbow which we made in Step 8.

Step 10



- Assemble the second hub pole: a 2" length of Class200pe grade $\frac{3}{4}$ " PVC pipe, the hook which we made in Step 6, a 6 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe, a $\frac{3}{4}$ " tee, a 10 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe and a $\frac{3}{4}$ " elbow.
- Assemble the third hub pole: the right-side bolt which we made in Step 5, a 2 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe, a $\frac{3}{4}$ " tee, a 6 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe, the second $\frac{3}{4}$ " tee, the second 6 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe and a $\frac{3}{4}$ " elbow.
- Assemble the fourth hub pole: a 2" length of Class200pe grade $\frac{3}{4}$ " PVC pipe, a $\frac{3}{4}$ " tee, a 10 $\frac{1}{2}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe and a $\frac{3}{4}$ " elbow.

Step 11



- Assemble all of the hub poles to the spokes in sequence.
- Glue all of the PVC. The reel body is ready.
- All of the pipes on the axle have to be Class200pe grade $\frac{3}{4}$ " PVC pipes, which have a bigger inner diameter so that a $\frac{1}{2}$ " Sch40 grade PVC pipe can go through as the shaft of the reel.



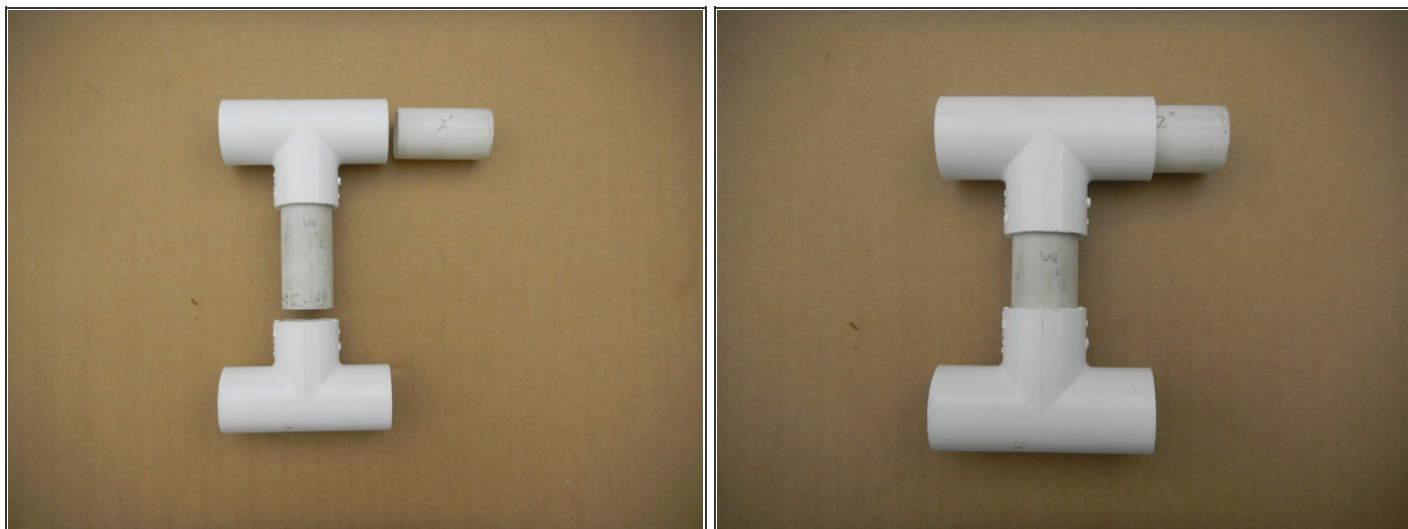
Step 12 — Make reel arm head



- Assemble the clip lock tee which we made in Step 8, a 2" length of Class200pe grade $\frac{3}{4}$ " PVC pipe and a $\frac{3}{4}$ "x $\frac{1}{2}$ " tee turned 90 degrees.
- Assemble a $4\frac{1}{4}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe to a $\frac{3}{4}$ "x $\frac{1}{2}$ " tee. A $2\frac{1}{2}$ " length of Class200pe grade $\frac{1}{2}$ " PVC pipe goes through a 1" coupling*, then connects the two $\frac{3}{4}$ "x $\frac{1}{2}$ " tees. The clip lock tee and the $4\frac{1}{2}$ " pipe are parallel pointing up.
- Don't glue yet.
- *Never glue the 1" coupling. It is a rolling element for untangling the hose.



Step 13 — Make reel arm pedal



- Assemble a $\frac{3}{4}$ " tee to a $\frac{3}{4}$ " length of Class200pe grade $\frac{3}{4}$ " PVC pipe. Connect the tee to a second $\frac{3}{4}$ "tee with a 2" length of Class200pe grade $\frac{3}{4}$ " PVC pipe. This assembly is a foot pedal.
- Align and glue.

Step 14 — Make reel arm hinge and pedal connector



- Take a $\frac{3}{4}$ " tee, remove the inner lip and scrape or sand its interior until it will slide and rotate on a $\frac{3}{4}$ " pipe. It will be a $\frac{3}{4}$ " hinge.
- Remove the inner lip from another one in the same way and cut it down 1" from the edge. It will be a $\frac{3}{4}$ " pedal connector.
- Another choice is to buy slip tees online. I cannot find slip tees in local hardware stores.



Step 15 — Make reel arm pole



- Assemble an 18" length of Class200pe grade $\frac{3}{4}$ " PVC pipe to the $\frac{3}{4}$ " hinge. Put the $\frac{3}{4}$ " pedal connector on the 18" length of Class200pe grade $\frac{3}{4}$ " PVC pipe and slide it down until the pedal connector's short side (the side we've cut 1" away from) touches the hinge. Glue the pedal connector on here.
- Don't glue the hinge to the 18" pipe yet.



Step 16 — Assemble reel arm



- Assemble the 2" length of Class200pe grade $\frac{3}{4}$ " PVC pipe of the pedal to the pedal connector on the arm pole. Turn pedal to 30 degrees with respect to the arm pole.
- Assemble the $\frac{3}{4}$ "x $\frac{1}{2}$ " tee on the clip lock tee side of the arm head to the 18" length of Class200pe grade $\frac{3}{4}$ " PVC pipe of the arm pole and turn the arm head 45 degrees.
- Don't glue yet.



Step 17 — Make reel base arm stopper



- Assemble a 4" length of Class200pe grade $\frac{3}{4}$ " PVC pipe, a $\frac{3}{4}$ " elbow, a 2" length of Class200pe grade $\frac{3}{4}$ " PVC pipe and a $\frac{3}{4}$ " tee.
- Align and glue.

Step 18 — Make reel base bolt catcher



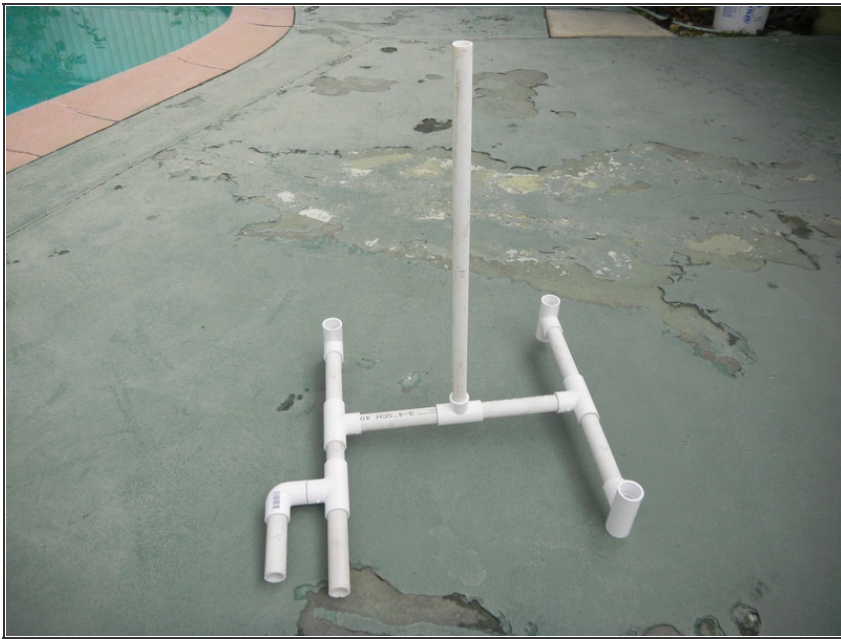
- Assemble a $\frac{3}{4}$ " coupling and a 2" length of Class200pe grade $\frac{3}{4}$ " PVC pipe.
- Glue them.

Step 19 — Make reel base

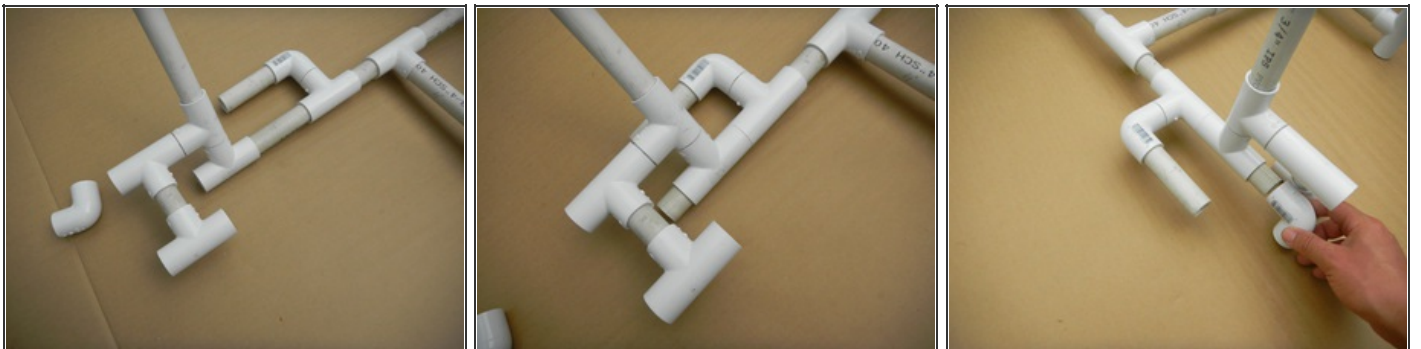


- Assemble a $\frac{3}{4}$ " tee, a $6\frac{1}{2}$ " length of Sch40 grade $\frac{3}{4}$ " PVC pipe*, the second $\frac{3}{4}$ " tee, the second $6\frac{1}{2}$ " length of Sch40 grade $\frac{3}{4}$ " PVC pipe and the third $\frac{3}{4}$ " tee together, with the second $\frac{3}{4}$ " tee turned 90 degrees to the front. This assembly is the rear side base.
- Assemble a $\frac{3}{4}$ " tee, a $6\frac{1}{2}$ " length of Sch40 $\frac{3}{4}$ " PVC pipe, the second $\frac{3}{4}$ " tee, the arm stopper which we made in Step 17 and a $5\frac{1}{4}$ " length of Class200pe $\frac{3}{4}$ " PVC pipe together, with the $5\frac{1}{4}$ " pipe on the left and the second $\frac{3}{4}$ " tee turned 90 degrees to rear. The arm stopper pipe goes to front and left parallel with the $5\frac{1}{4}$ " pipe. This is the front side base.
- Assemble two $6\frac{1}{2}$ " lengths of Sch40 grade $\frac{3}{4}$ " PVC pipe and a $21\frac{1}{4}$ " length of Sch40 grade $\frac{1}{2}$ " PVC pipe onto a $\frac{3}{4}$ "x $\frac{1}{2}$ " tee. The $21\frac{1}{4}$ " length Sch40 grade $\frac{1}{2}$ " PVC pipe is the shaft of the reel. This assembly is the shaft base.
- *Sch40 grade PVC pipe is recommended in this step to make a strong base. Class200pe grade PVC is recommended for the other pipes to keep the reel light.



Step 20

- Assemble rear side base, front side base and shaft base together.
- Align and glue.
- Make sure that the 21¼" shaft is vertical.

**Step 21 — Assemble reel arm and bolt catcher to reel base**

- Slide the hinge of the reel arm onto the 5½" length of Class200pe grade ¾" PVC pipe of the reel base.
- Assemble a ¾" elbow on the end of the 5½" pipe.
- Glue the elbow on.

Step 22



- Assemble the bolt catcher which we made in Step 18 to the right 3/4" tee of the rear base.
- Don't glue yet.



Step 23 — Fit the reel and drill bolt holes



- Slide the reel body axle onto the shaft of the reel base.
- Lock the clip lock tee to the clip lock elbow to hold the arm to the reel body. Slide out the pex pipes of left bolt and right bolt.
- Use a pencil to mark the pex pipe on the arm.

Step 24



- Use a pencil to mark the pex pipe on the bolt catcher of the rear base.

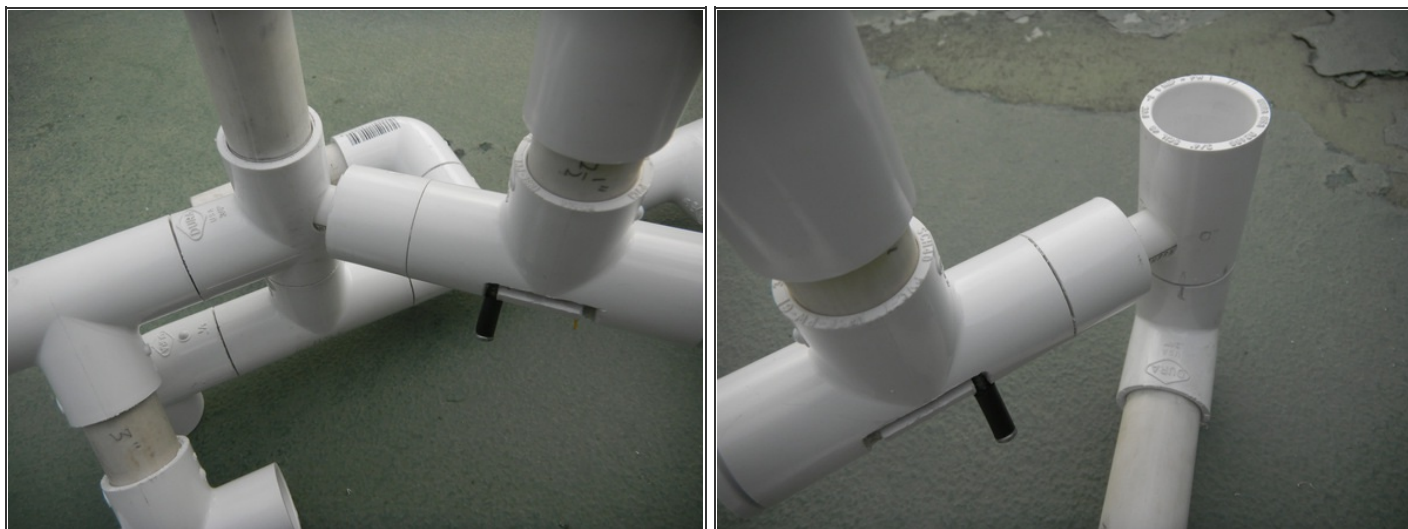
Step 25



- Drill a hole on the arm as the catch of left bolt of the reel body, and drill a hole on the reel base bolt catcher as catch of right bolt, both with a 5/8" drill bit.
- Chamfer the holes' edges to make the pex pipe easy to slide in.
- Since we haven't glued them, we can take out them to drill the holes.



Step 26



- Reassemble the arm and the bolt catcher. Fitting holes with bolts, adjust as necessary.

Step 27



- Fitting clip lock.
- Here you may need do some adjustments. For example, you may need to sand the snap clip ends more round and sand the clip tee's interior so they are easy to lock together.
- Glue arm pole to the hinge.
- Glue the bolt catcher on the base.
- Adjust the angles of the arm pedal and arm head. Glue them*.
- *Never glue the 1" coupling. It is a rolling element for untangling the hose.



Step 28 — Finish the pool hose reel and try it



- Open the arm.
- Put pool hose head in the hook.

Step 29



- The hose goes over the roller on the arm.
- Rotate the reel to wind hose from pool.

Step 30



- Lock the arm to hold the hose.
- Slide both barrel bolts to lock the reel to the base.

Step 31



- Place pool cleaning tools in the reel for storage.
- Use gravity to unwind the hose.

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